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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,156	10/16/2003	Rick L. Adkins	PO-7934/MD-02-75	7891

157 7590 02/07/2006

BAYER MATERIAL SCIENCE LLC
100 BAYER ROAD
PITTSBURGH, PA 15205

EXAMINER

SERGEANT, RABON A

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/687,156

Applicant(s)

ADKINS ET AL.

Examiner

Rabon Sergeant

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2005.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
4a) Of the above claim(s) 1-10 and 32-53 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 11-31 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/16/03.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

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1. Applicant's election without traverse of Group II, claims 11-31 in the reply filed on October 28, 2005 is acknowledged. The Election of Species requirement has been withdrawn.
2. Claims 13 and 24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicants have failed to specify the type of molecular weight (i.e.; weight average or number average) for the ethylenically unsaturated macromer or the means by which the recited molecular weight has been determined. Absent this information, one of ordinary skill in the art could not adequately identify the macromer without resorting to undue experimentation. *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).
3. Claims 11-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Firstly, within claims 11 and 22, the use of "may or may not be" and "may be" renders the claims indefinite, because it is unclear to what extent the subject matter denoted by the language is subjective.

Secondly, within the definition of Y within claims 11 and 22, it is unclear what is being referred to by "the carbon atoms". The language lacks antecedence.

Thirdly, within claims 17 and 28, the language, "amount 2%", appears to be improper.

Fourthly, within claims 21 and 31, the language, "less about 50%", appears to be improper.

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Fifthly, within claims 21 and 31, it is unclear what constitutes "low unsaturation". The language is subjective, and it is unclear from the specification if the quantitative amount is mandated to be 0.02 meq/g or less.

Sixthly, within the definition of Y within claims 11 and 21, it is unclear what compounds are encompassed by the language, "polymerized form". The position is taken that the language is of such unrestricted scope that the definition and claims are rendered indefinite.

Lastly, the structure of the ethylenically unsaturated macromer is confusing in view of the definitions of X and Y. Since the definition of Y appears to encompass oxygen or ether terminated structures, it is unclear if the macromer is required to have a -S-O- or -O-O- linkage.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 11-19 and 22-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Preston et al. ('271 or '947) or Yu ('358).

Patentees disclose addition products of unsaturated polyols containing alkenyl aryl constituents and ethylenically unsaturated monomers, such as styrene, acrylonitrile, and mixtures thereof, wherein the unsaturated polyols have structures that meet those of applicants. Patentees further disclose that the addition polymerization may occur in the presence of polyol diluents. See abstract, columns 2-5, and examples within Preston et al. ('271). See abstract and columns 2-7 within Preston et al. ('947). See abstract and columns 3-12 within Yu. Given the disclosure of mixtures of the ethylenically unsaturated monomers, the preferred use of styrene and acrylonitrile, the examples, and the breadth of applicants' ratio range for the monomers, the position is taken that one would have clearly envisaged the ratio of claims 15 and 26 from patentees' disclosures.

6. Claims 11-19 and 22-29 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 87/03886.

The reference discloses addition products of unsaturated monols or polyols and ethylenically unsaturated monomers, such as styrene, acrylonitrile, and mixtures thereof, suitable for use as dispersants for polymer-polyols, wherein the unsaturated monols or polyols have structures that meet those of applicants. The reference discloses such structures at page 6, lines 18-20 and 42-44, wherein phenylene linkages are disclosed as being preferred for the R³ variable

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of the structure. The reference further discloses that the addition polymerization may occur in the presence of monols and polyols and chain transfer agents. See pages 11 and 12.

7. Claims 11-19, 21, 22-29, and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Holeschovsky et al. ('731).

Holeschovsky et al. disclose at column 7, lines 28-30 that the stabilizers of WO 87/03886 may be produced using low intrinsic unsaturation polyether polyols, that correspond to those of claims 21 and 31. WO 87/03886 has been discussed within paragraph 6 of this Office action.

8. Claims 20, 21, 30, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 87/03886 in view of Holeschovsky et al. ('731).

As aforementioned, the primary reference discloses addition products of unsaturated monols or polyols and ethylenically unsaturated monomers, such as styrene, acrylonitrile, and mixtures thereof, suitable for use as dispersants for polymer-polyols, wherein the unsaturated monols or polyols have structures that meet those of applicants. The reference discloses such structures at page 6, lines 18-20 and 42-44, wherein phenylene linkages are disclosed as being preferred for the R^3 variable of the structure. The reference further discloses that the addition polymerization may occur in the presence of monols and polyols and chain transfer agents. See pages 11 and 12.

9. The primary reference is silent with respect to applicants' specific alcohols of claims 20 and 30 and the specific polyol of claims 21 and 31. With respect to the specifically claimed alcohols, the position is taken that it would have been obvious to utilize any alcohol, such as those claimed, that would have been expected to be miscible with the base polyol, as suggested at page 11 of the primary reference. With respect to the specifically claimed polyol of claims 21

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and 31, the position is taken that it was known at the time of invention to produce stabilizers having induced unsaturation from low intrinsic unsaturation polyols. See abstract of Holeschovsky et al. Holeschovsky et al. specifically disclose the stabilizers of WO 87/03886 at column 3 of the reference and the use of low unsaturation polyether polyols to produce such polymer polyol stabilizers at columns 3-7, especially column 7, lines 28-30. In view of this teaching, it would have been obvious to produce the stabilizer of WO 87/03886 using low unsaturation polypropylene polyols.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.


RABON SERGENT
PRIMARY EXAMINER

R. Sergent
February 3, 2006